



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0797; Product Identifier 2018-SW-081-AD; Amendment 39-21464; AD 2021-05-21]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. (Type Certificate Previously Held by Agusta S.p.A.) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2017-23-08 for Agusta S.p.A. (now Leonardo S.p.a.) Model AB139 and AW139 helicopters. AD 2017-23-08 required repetitively inspecting the main rotor (M/R) rotating scissors, removing certain lower half scissor spherical bearings (bearings) from service, replacing the removed bearings with a new bearing, and installing a special nut. This new AD retains the requirements of AD 2017-23-08 and requires replacing each affected bearing with a certain part-numbered bearing. This AD was prompted by investigation results determining that a quality control issue may have affected the production of the affected bearings. The actions of this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0797.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> in Docket No. FAA-2020-0797; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, any service information that is incorporated by reference, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Matt Fuller, AD Program Manager, Operational Safety Branch, Airworthiness Products Section, General Aviation and Rotorcraft Unit, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email Matthew.Fuller@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-23-08, Amendment 39-19102 (82 FR 55752, November 24, 2017) (AD-2017-23-08). AD 2017-23-08 applied to Agusta S.p.A. (now Leonardo S.p.a.)

Model AB139 and AW139 helicopters with M/R rotating scissors with a bearing part number (P/N) 3G6230V00654 installed. The NPRM published in the *Federal Register* on September 15, 2020 (85 FR 57165). The NPRM proposed to retain the repetitive inspection requirements of AD 2017-23-08, and continue to require replacing the bearing with an improved bearing, replacing the rotating scissor attachment flange with a certain part-numbered rotating scissor attachment flange, and replacing the nut with a certain part-numbered special nut. The NPRM also proposed to require removing each bearing P/N 3G6230V00654 from service and replacing it with bearing P/N 3G6230V00655 within 100 hours time-in-service (TIS).

The NPRM was prompted by EASA Emergency AD (EAD) No. 2017-0028-E, dated February 15, 2017 (EASA EAD 2017-0028-E) issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Leonardo S.p.a. Model AB139 and AW139 helicopters. EASA advises that investigation results by the supplier of the bearings determined that a quality control issue may have affected the production of bearing P/N 3G6230V00654. Accordingly, this AD retains the requirements of AD 2017-23-08 and requires replacing bearing P/N 3G6230V00654 with P/N 3G6230V00655.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Support for the NPRM

An individual commenter supported the NPRM.

Request for the FAA to Provide More Information

Request: One commenter requested more information about the purpose of this new AD. The commenter stated that the AD from 2017 (AD 2017-23-08) already

removes all P/N 3G6230V00654 bearings from service.

FAA Response: The FAA disagrees that this AD is unnecessary. AD 2017-23-08 only required the replacement of the bearing if it failed an inspection, whereas this AD requires this part-numbered bearing to be removed from service within a certain compliance time.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA of the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all of the information provided by EASA and determining the unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Differences Between this AD and the EASA AD

The EASA AD specifies some compliance times using calendar time, whereas this AD does not. The EASA AD requires reporting information to Leonardo S.p.a. Product Support Engineering, whereas this AD does not.

Related Service Information Under 1 CFR part 51

The FAA reviewed Leonardo Helicopters Alert Bollettino Tecnico No. 139-392, Revision A, dated February 14, 2017. This service information specifies repetitively inspecting the M/R rotating scissors to monitor the bearings and replacing the bearing with a new part-numbered bearing. This service information also specifies installing a special nut in case of lower scissor bearing dislodging.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed Leonardo Helicopters AW139 IETP Document Code AMP-39-A-62-31-00-00A-31AC-A, Rotating control installation—Fixed swashplate and rotating scissors—Detailed inspection, Issue 29, dated July 31, 2017, which describes procedures for a detailed inspection of the fixed swashplate and rotating scissors.

Costs of Compliance

The FAA estimates that this AD affects 102 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this AD.

Inspecting for bearing liner wear, seat movement, and play takes about 1 work-hour for a cost of \$85 per helicopter and \$8,670 for the U.S. fleet per inspection cycle.

Replacing a bearing takes about 2 work-hours and parts cost about \$950 for a cost of \$1,120 per bearing.

Replacing a rotating scissor attachment flange takes about 0.25 work-hours and parts cost about \$25,629 for a cost of \$25,650 per flange.

Installing two special nuts takes about 1 work-hour and parts cost about \$755 for a cost of \$840 per helicopter and \$85,680 for the U.S. fleet.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive (AD) 2017-23-08, Amendment 39-19102 (82 FR 55752, November 24, 2017); and
- b. Adding the following new AD:

2021-05-21 Leonardo S.p.a. (Type Certificate Previously Held by Agusta S.p.A.):

Amendment 39-21464; Docket No. FAA-2020-0797; Product Identifier 2018-SW-081-AD.

(a) Applicability

This airworthiness directive (AD) applies to Leonardo S.p.a. Model AB139 and AW139 helicopters, certified in any category, with main rotor (M/R) rotating scissors with a lower half scissor spherical bearing (bearing) P/N 3G6230V00654 installed.

(b) Unsafe Condition

This AD defines the unsafe condition as excessive play of the bearing in the M/R rotating scissors. This condition could result in failure of the M/R rotating scissor bearing and loss of helicopter control.

(c) Affected ADs

This AD replaces AD 2017-23-08, Amendment 39-19102; (82 FR 55752, November 24, 2017) (AD 2017-23-08).

(d) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

(1) Within 5 hours time-in-service (TIS) after December 11, 2017 (the effective date of AD 2017-23-08), and thereafter before the first flight of each day or at intervals not exceeding 24-clock hours, whichever occurs later:

(i) Using a magnifying glass and a flashlight, visually inspect each bearing for wear of the bearing liner. Some examples of wear are shown in Figures 4 through 8 of

Leonardo Helicopters Alert Bollettino Tecnico No. 139-392, Revision A, dated February 14, 2017 (BT 139-392). If there is any wear of the liner, before further flight, replace the bearing with bearing P/N 3G6230V00655 and install special nut P/N 3G6230A06851. Replacing the bearing with bearing P/N 3G6230V00655 constitutes terminating action for the remaining actions of this AD for the bearing.

(ii) Inspect each bearing for movement. Refer to Figure 9 of BT 139-392. If the bearing moves freely out of its seat, before further flight, replace the rotating scissor attachment flange with flange P/N 3G6220A00633, replace the bearing with bearing P/N 3G6230V00655 and install special nut P/N 3G6230A06851. Replacing the bearing with bearing P/N 3G6230V00655 constitutes terminating action for the remaining actions of this AD for the bearing.

(iii) Inspect the M/R rotating scissors for play and wear of each bearing, paying particular attention to the bearing staking condition, by manually moving the lower half scissor along the axis of the spherical bearing. Refer to Figure 1 of BT 139-392. If there is any play or wear beyond allowable limits, before further flight, replace the bearing with bearing P/N 3G6230V00655 and install special nut P/N 3G6230A06851. Replacing the bearing with bearing P/N 3G6230V00655 constitutes terminating action for the remaining actions of this AD for the bearing.

(2) Within 100 hours TIS after the effective date of this AD, replace and torque each lower half scissor nut with special nut P/N 3G6230A06851 to the M/R rotating scissor in accordance with the Compliance Instructions, Part II, steps 5.1 through 5.9 of BT 139-392, except you are not required to discard parts.

(3) Within 100 hours TIS after the effective date of this AD, remove each bearing P/N 3G6230V00654 from service and replace with bearing P/N 3G230V00655.

(4) After December 11, 2017 (the effective date of AD 2017-23-08), do not install on any helicopter any M/R rotating scissors with a bearing P/N 3G6230V00654 installed.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Strategic Policy Rotorcraft Section, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the Strategic Policy Rotorcraft Section, send it to the attention of: Matt Fuller, AD Program Manager, Operational Safety Branch, Airworthiness Products Section, General Aviation and Rotorcraft Unit, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(h) Additional Information

(1) For service information identified in this AD, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>.

(2) The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD No. 2017-0028-E, dated February 15, 2017. You may view the EASA AD on the internet at <https://www.regulations.gov> in the AD Docket.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6200, Main Rotor System.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Leonardo Helicopters Alert Bollettino Tecnico No. 139-392, Revision A, dated February 14, 2017.

(ii) [Reserved]

(3) For service information identified in this AD, contact Leonardo S.p.A. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G. Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on February 26, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.
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